

FIG. 1



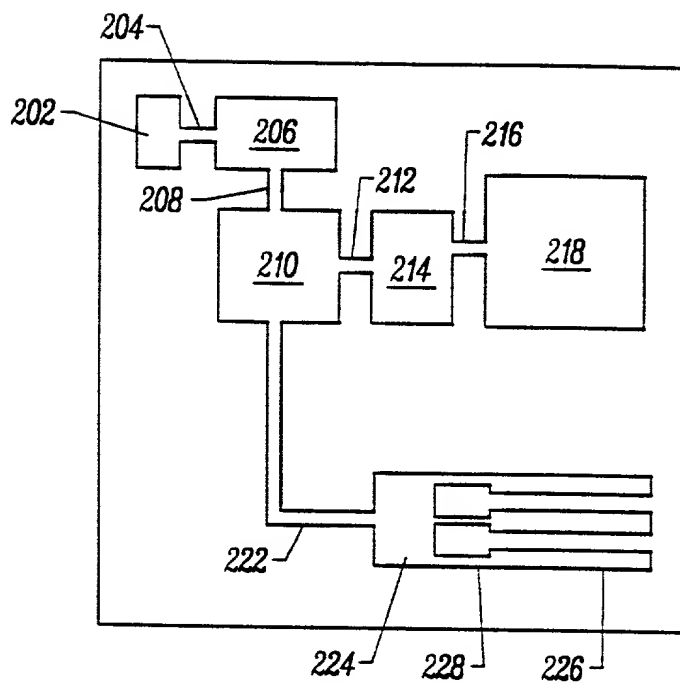


FIG. 3

FIG. 4A

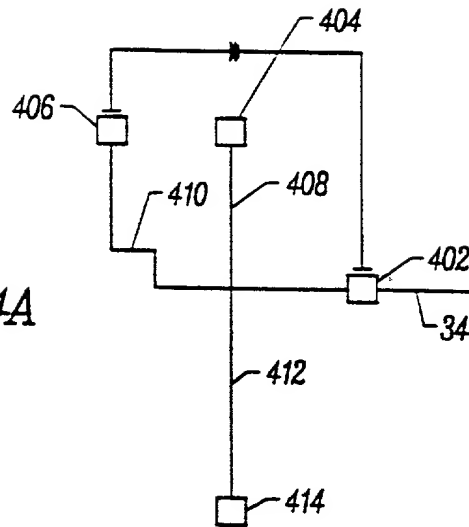


FIG. 4B

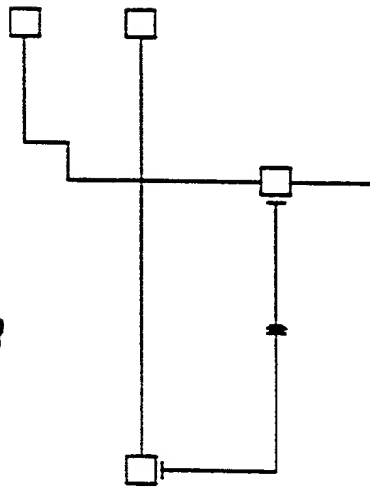
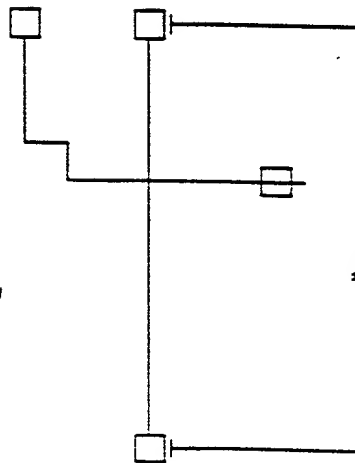


FIG. 4C



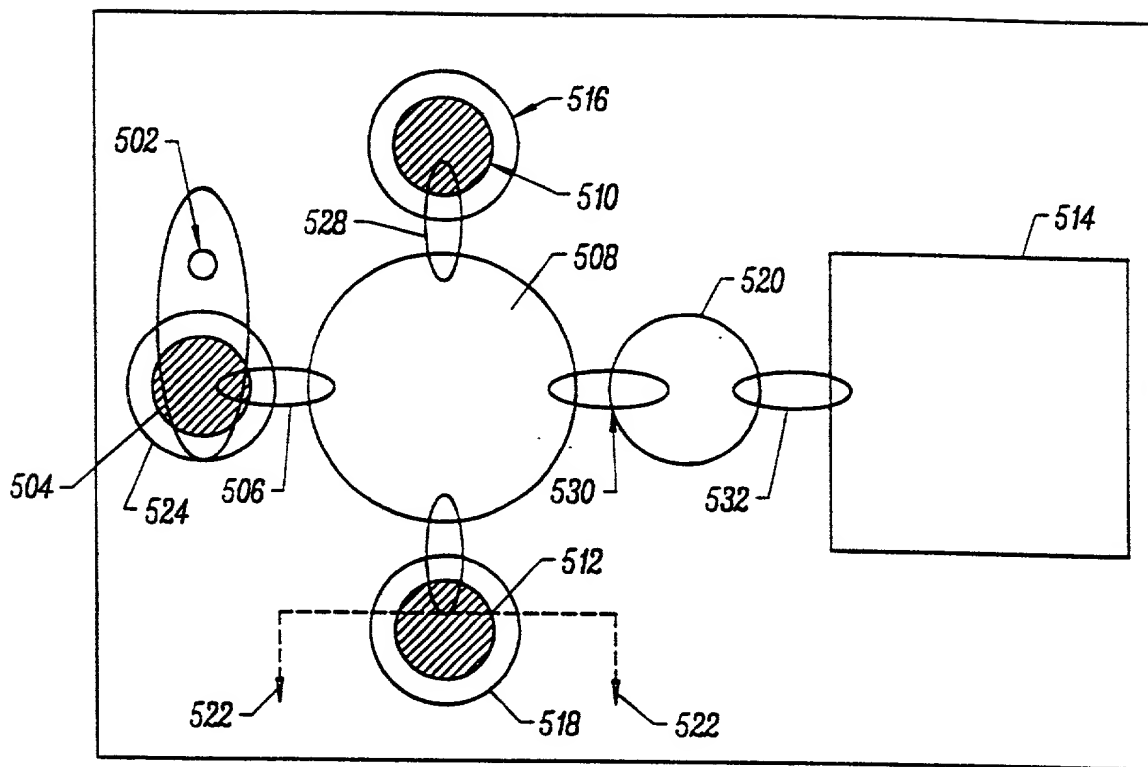


FIG. 5A

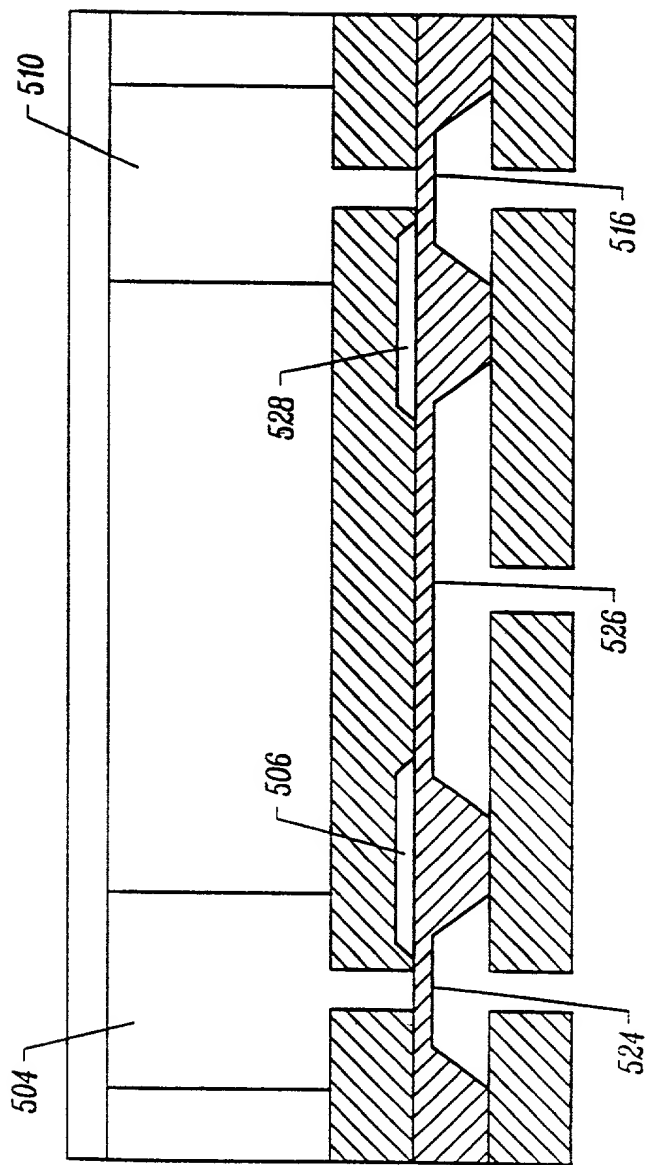


FIG. 5B

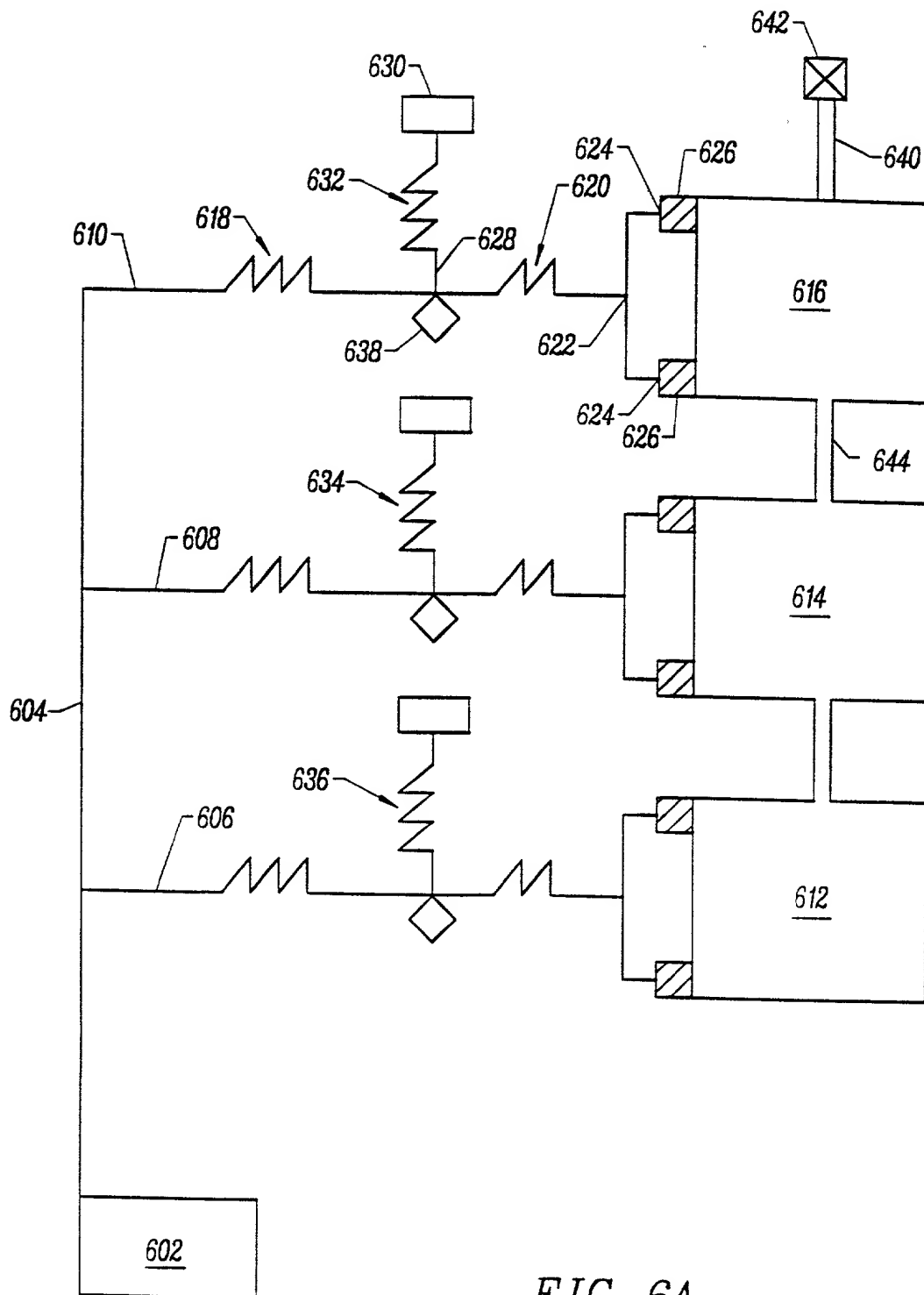


FIG. 6A

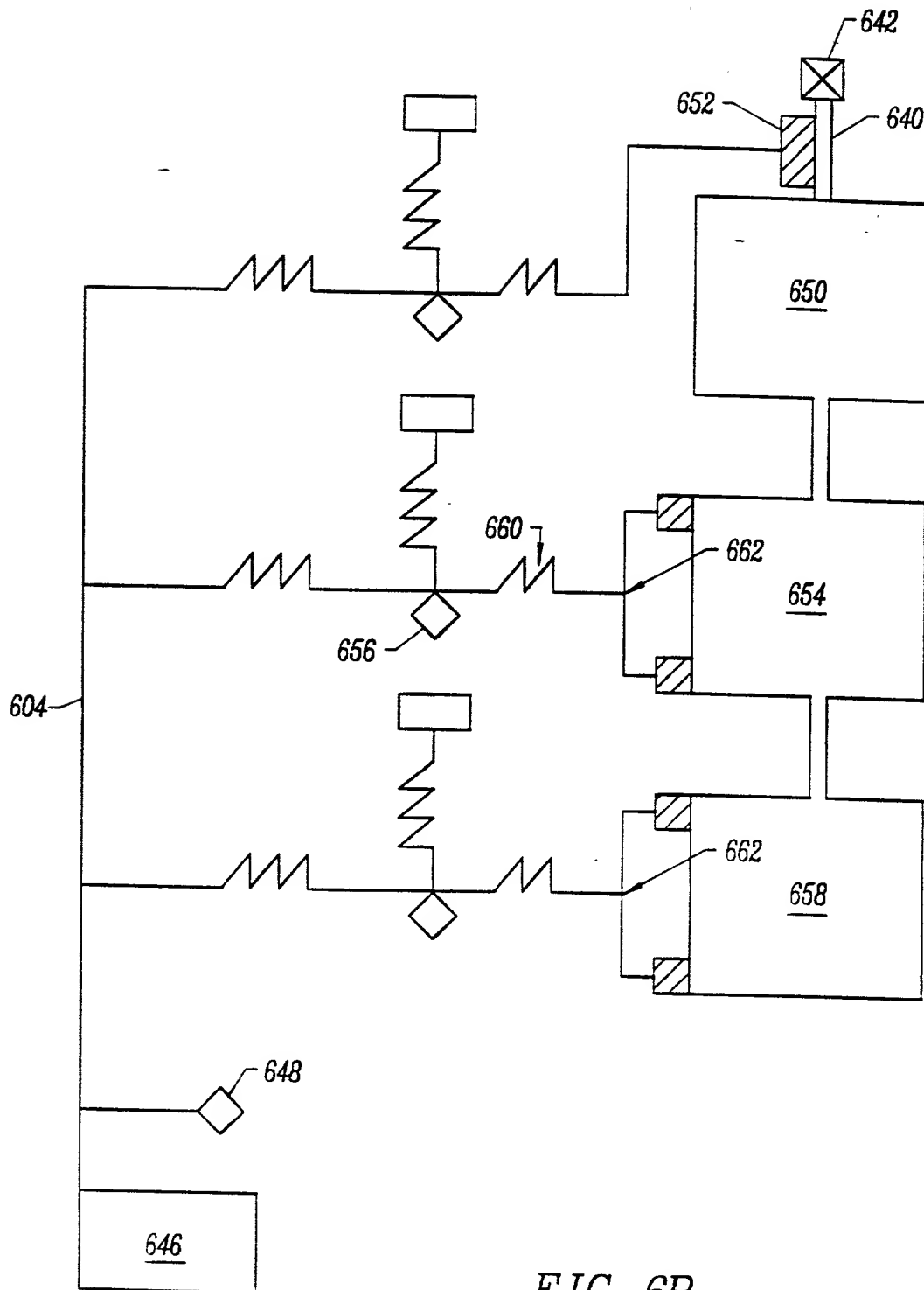
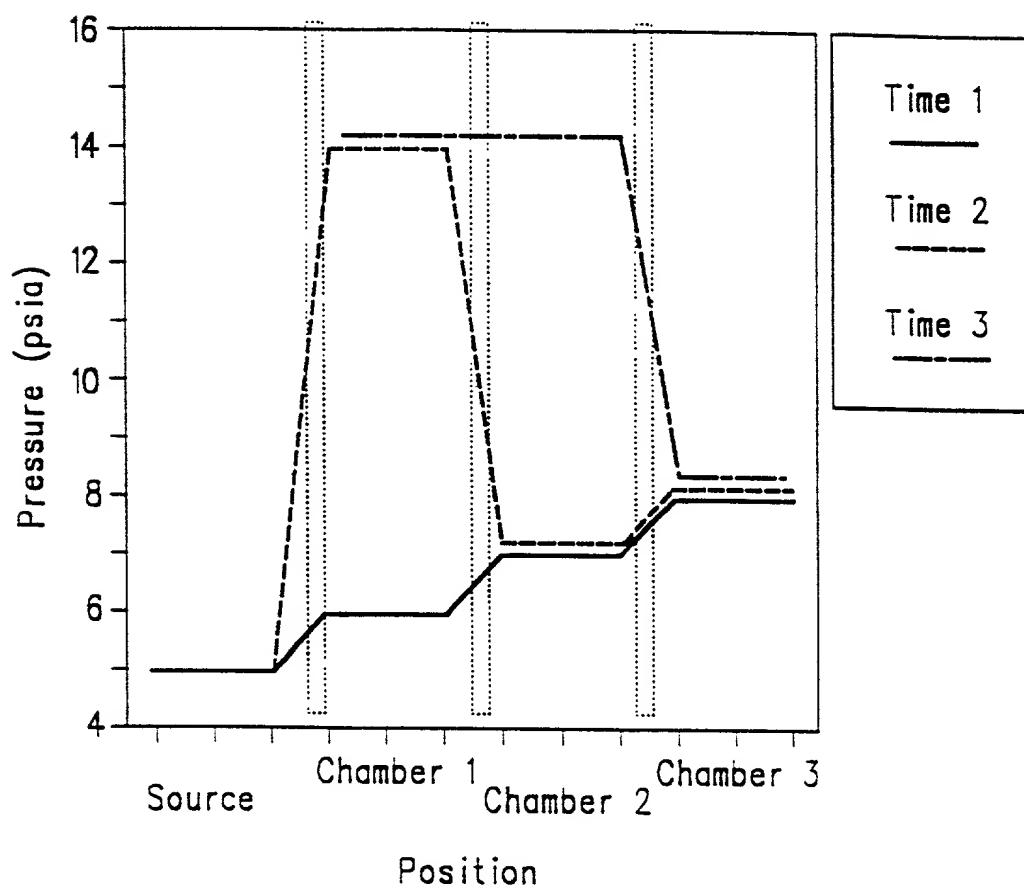


FIG. 6B



TOP SECRET

# Pressure Distribution Among Control Nodes



*FIG. 6C*

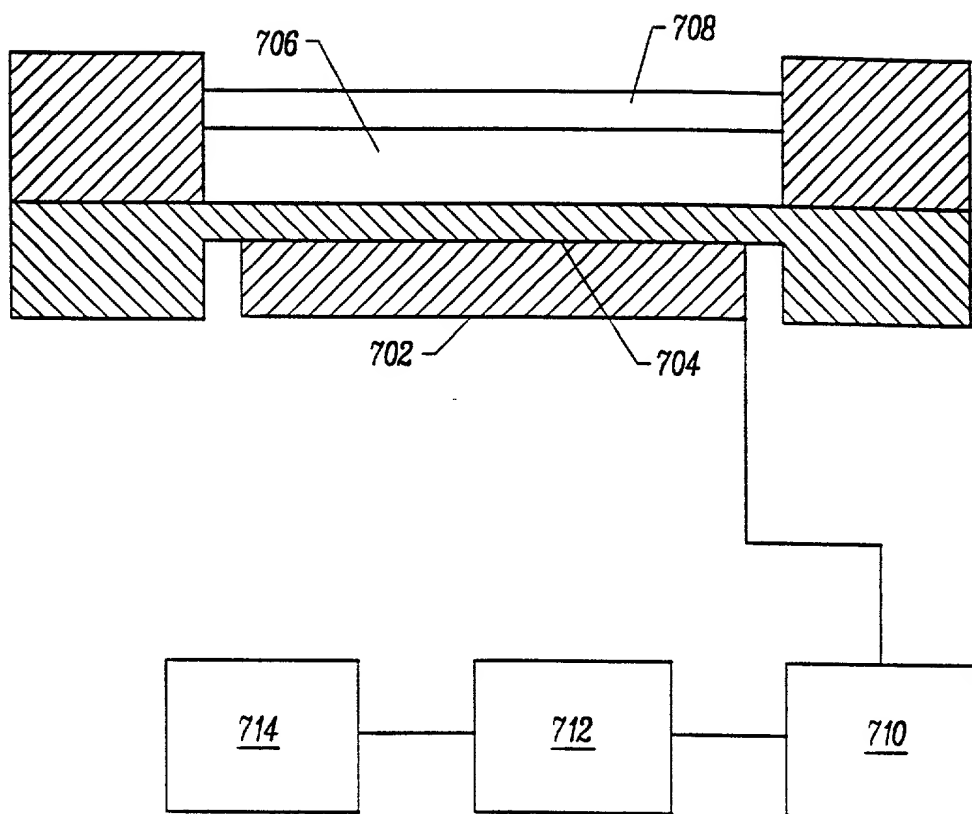


FIG. 7A

# Flow Visualization

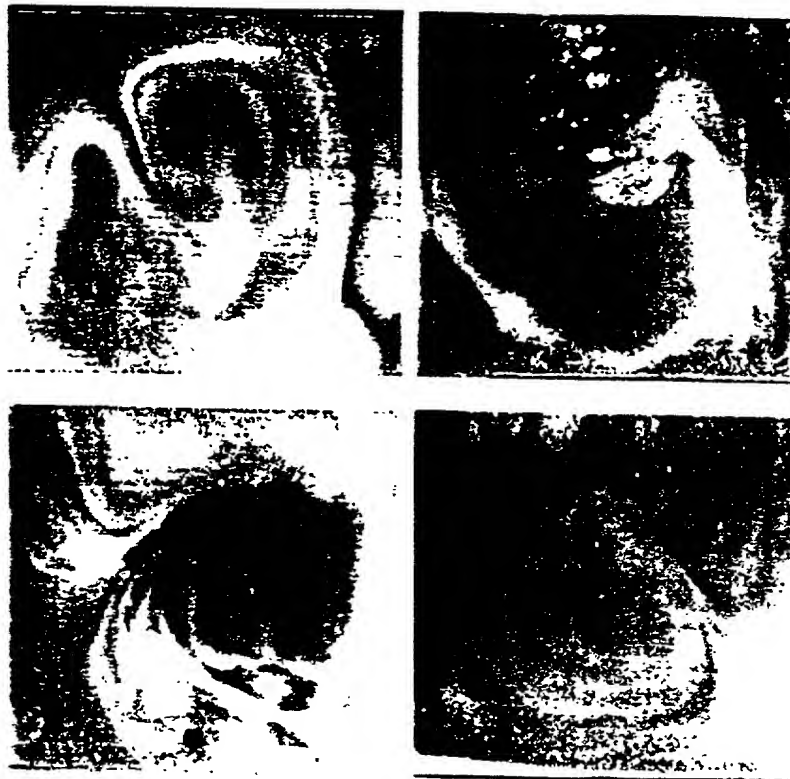


FIG. 7B

FOUO-89T5/60

A 3D bar chart illustrating the normalized intensity of a signal over a 40-minute period for four different conditions. The vertical axis represents 'Intensity (normalized)' from 0 to 1.0. The horizontal axis represents 'time (minutes)' from 0 to 40. The depth axis lists the conditions: 'mechanical shaking', 'acoustic', 'stagnant', and 'optimized acoustic'. The 'stagnant' condition shows a rapid decay to zero intensity by 20 minutes. The 'optimized acoustic' condition shows the most stable and highest intensity across the 40-minute period.

Time (minutes)	mechanical shaking	acoustic	stagnant	optimized acoustic
0	0.20	0.20	0.20	0.20
10	0.20	0.20	0.20	0.20
20	0.20	0.20	0.00	0.20
30	0.20	0.20	0.00	0.20
40	0.20	0.20	0.00	0.20

FIG. 7C

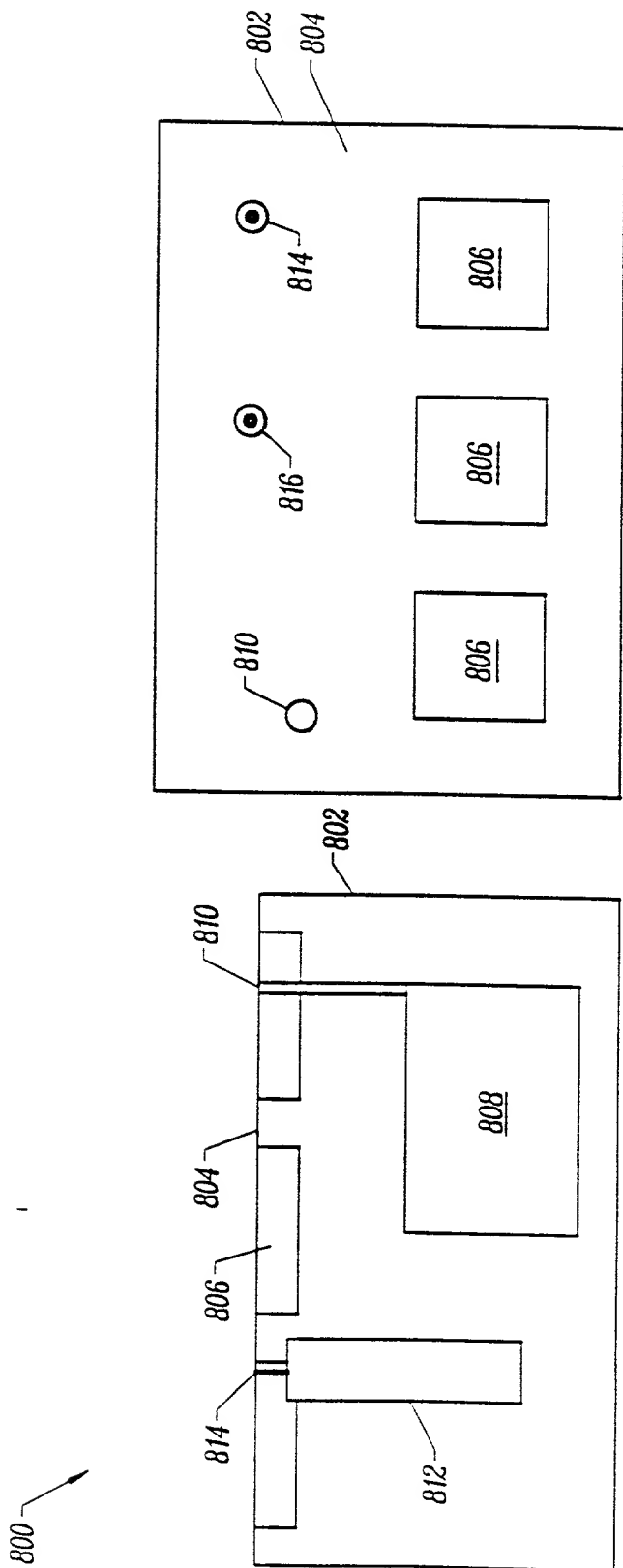


FIG. 8

Cycles: 35	Ini Den	Den	Ann	Fin Ext	Hold
Temp	94.0	94.0	65.0	72.0	10.0
Time(s)	60	20	40	50	60
Temp Hem	0	0	0	42	0
Cyc Hem 19	St. Time [Min]	85.4	Tue. Nov. 14, 1995		
11:31 AM					

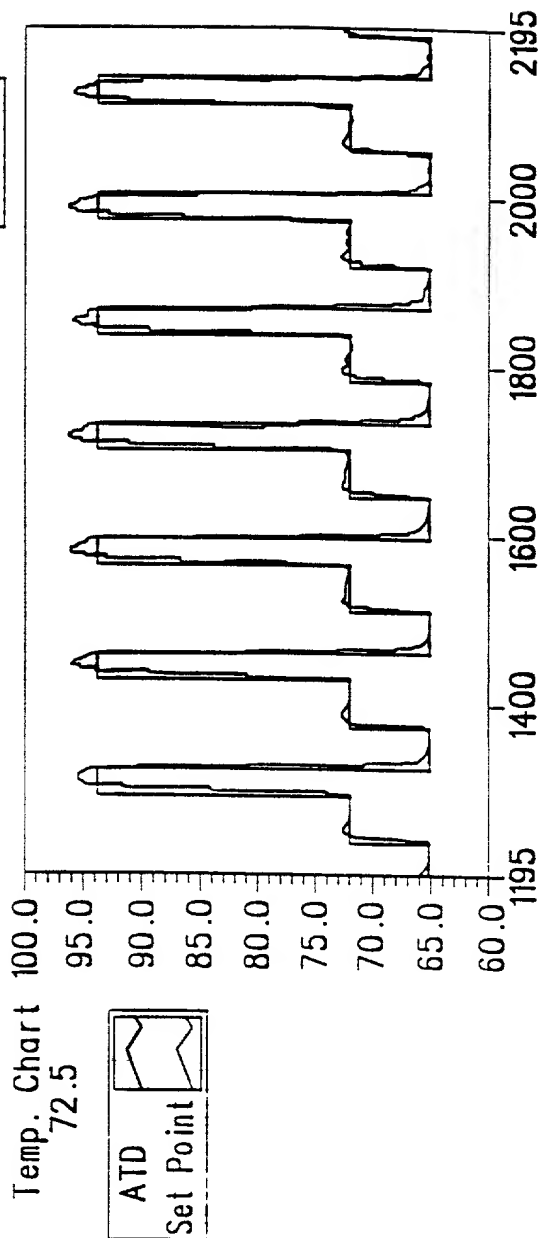
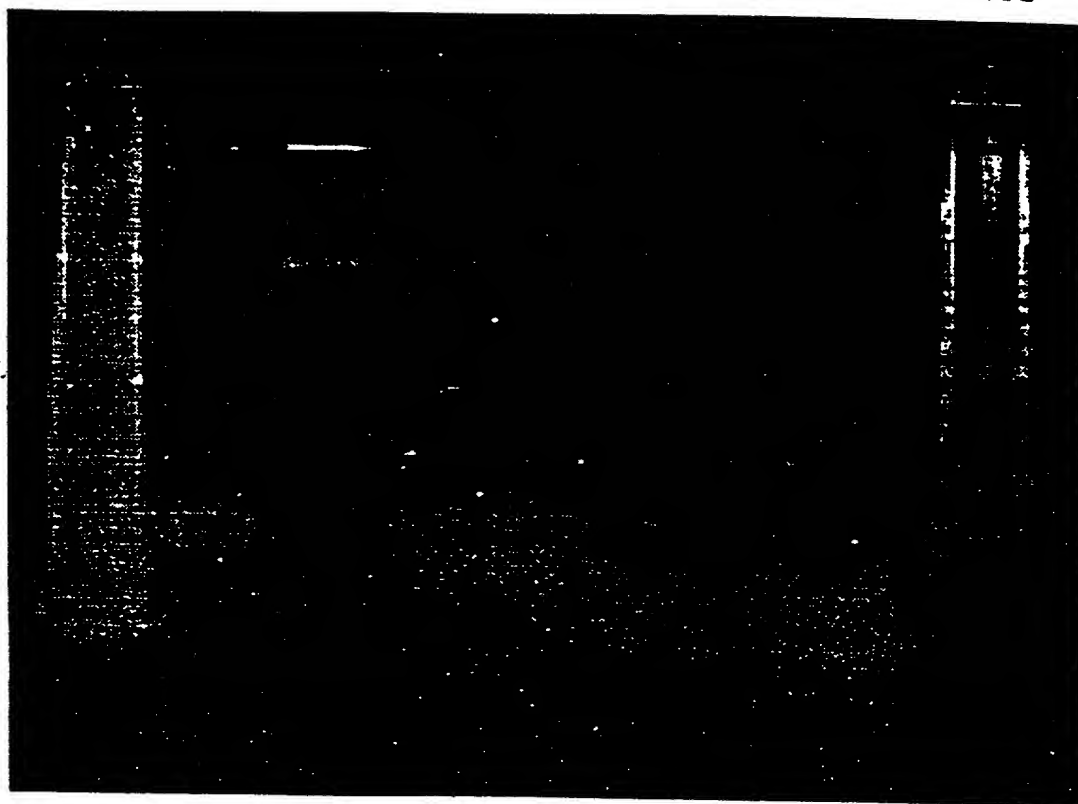


FIG. 9

## Effect of Fragmentation Time at 94C

t = 0 5 10 30 60 120 minutes



Correct Call Rates:

74%	95.8%	95.9%
95.9%	95.5%	83%

FIG. 10A

## Tube Based

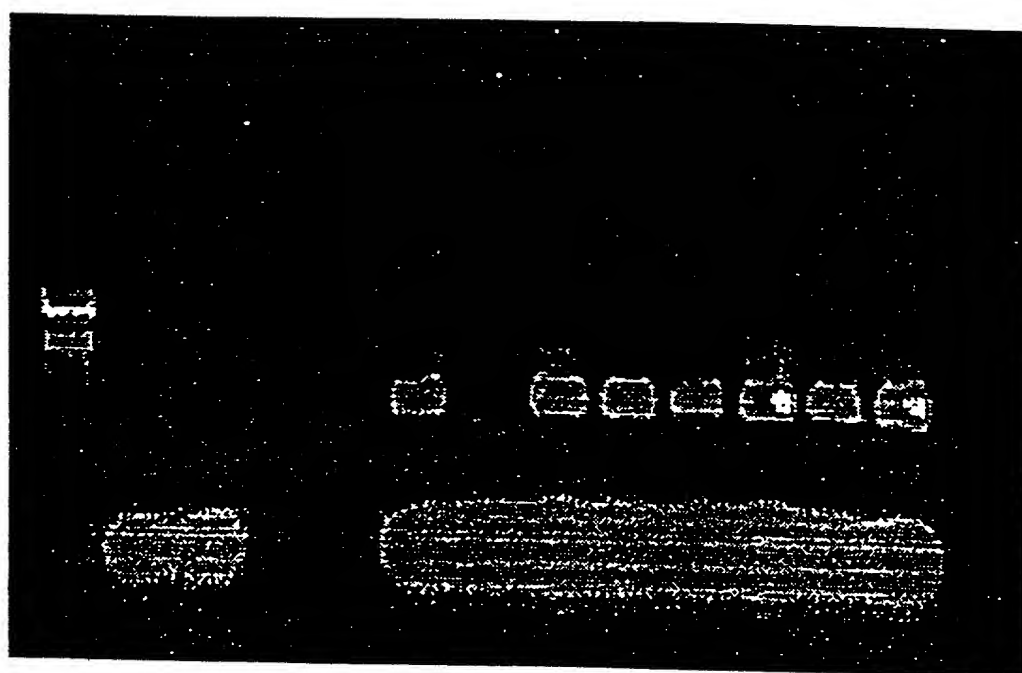


FIG. 10B



## PCR Results

### ■ PCR:

amplification:  $10^9$  (35 cycles)

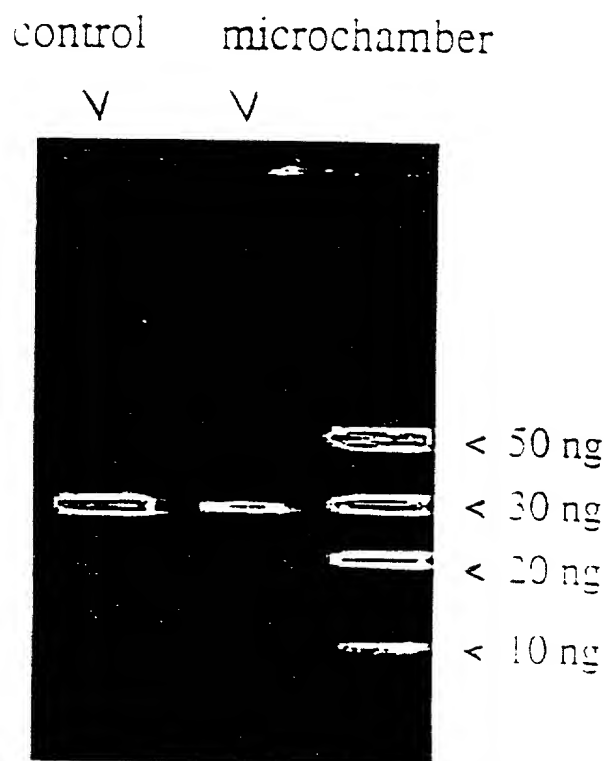


FIG. 10C

1100

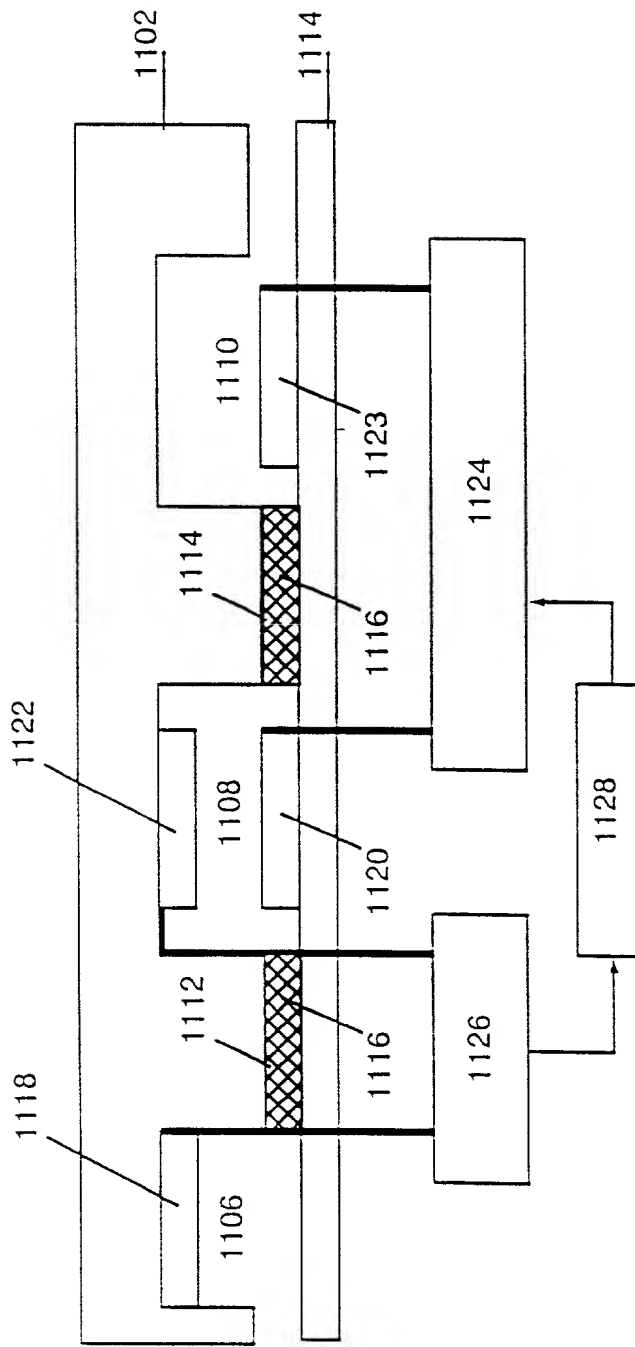


Figure 11

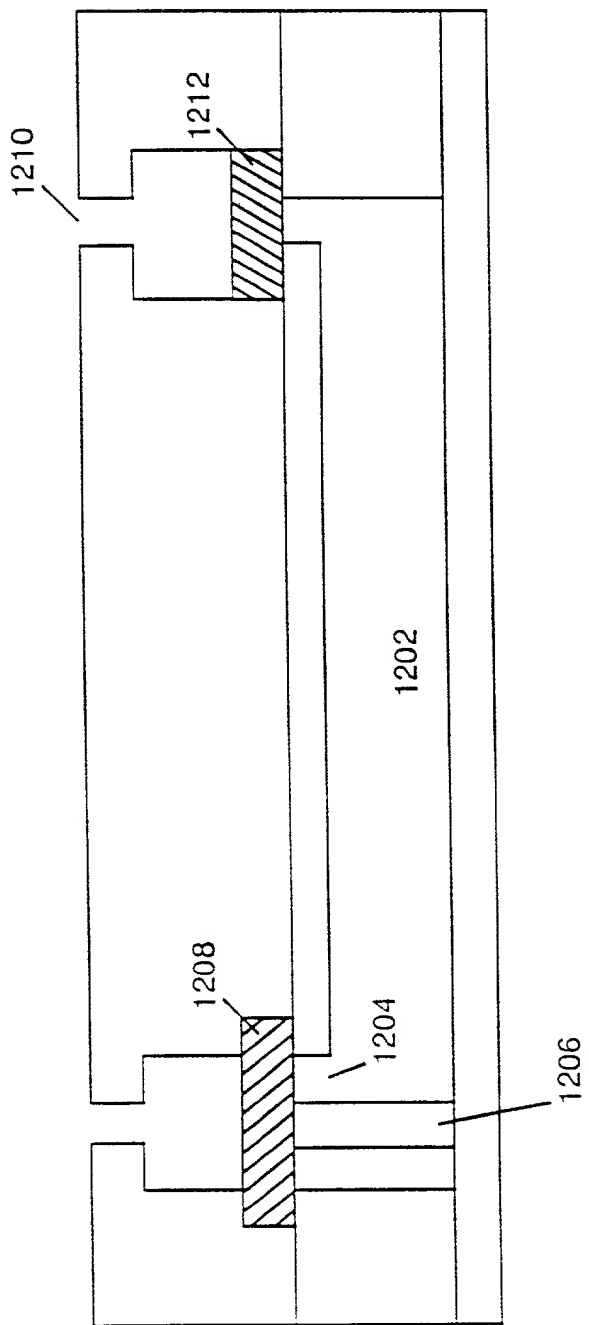


Figure 12a

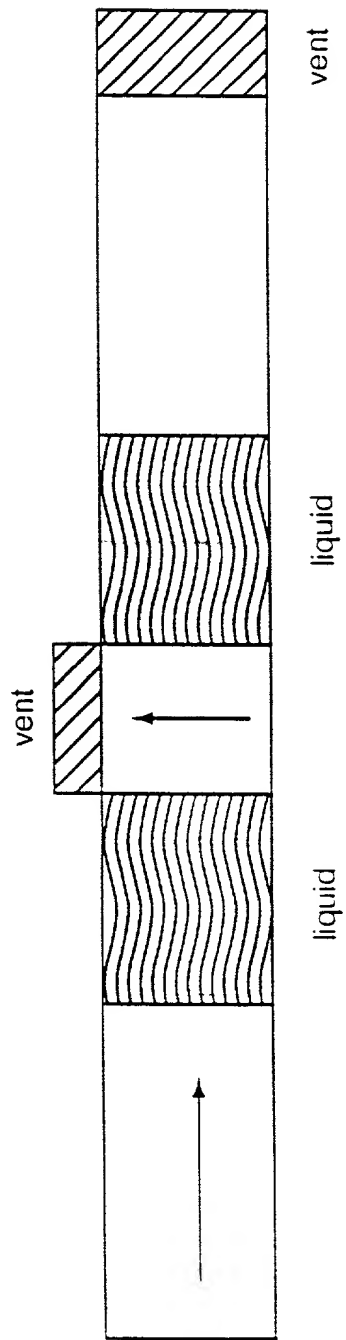


Figure 12b

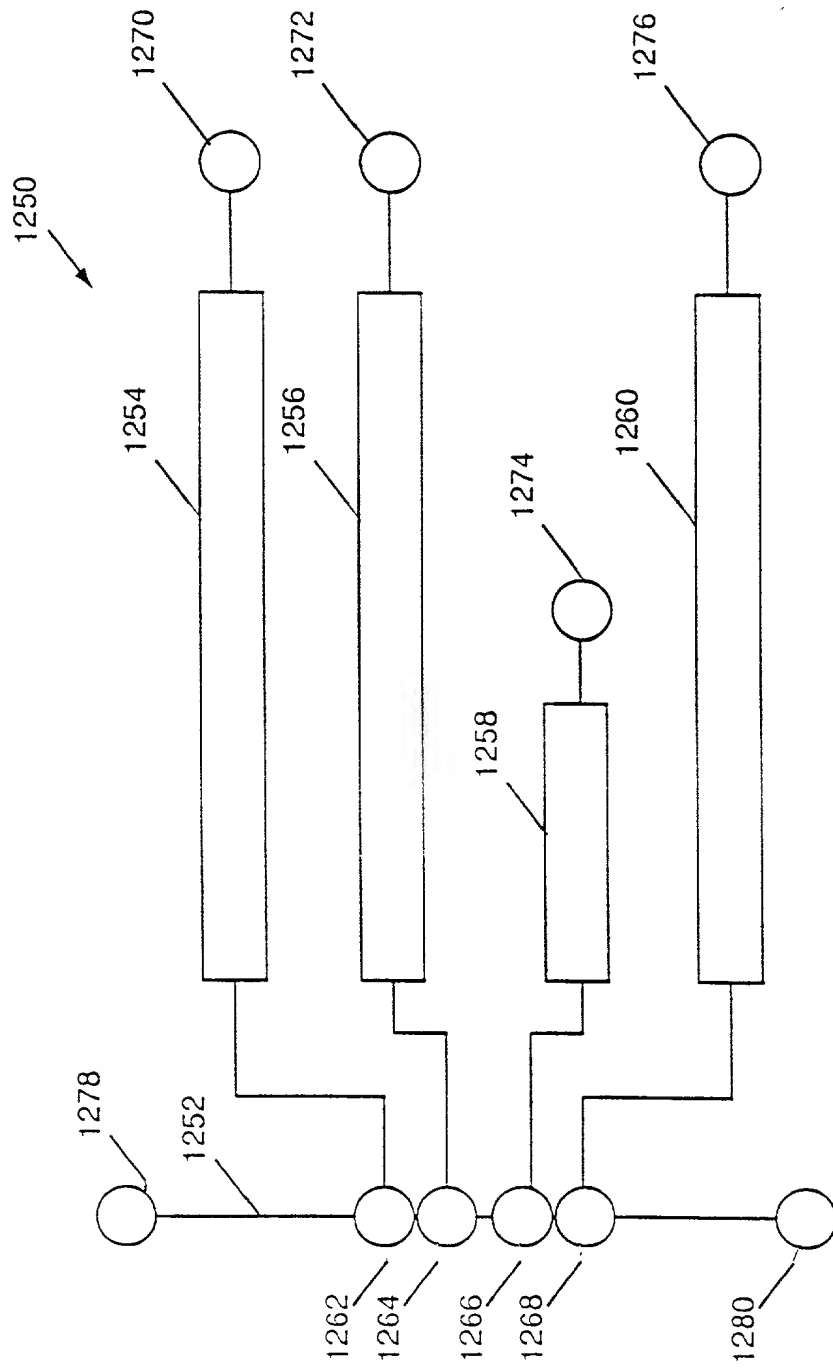


Figure 12c

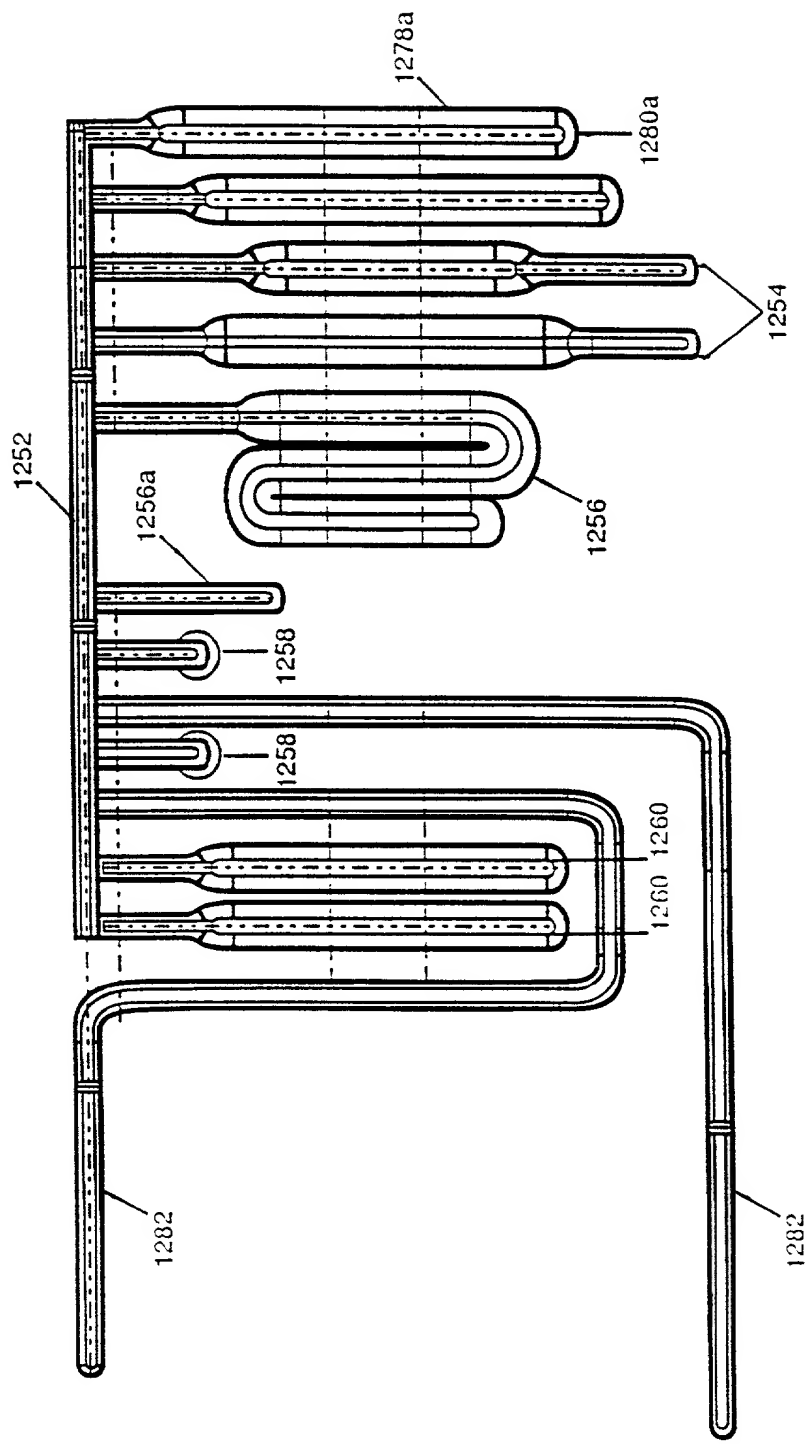


Figure 12d







## Thermal Configuration

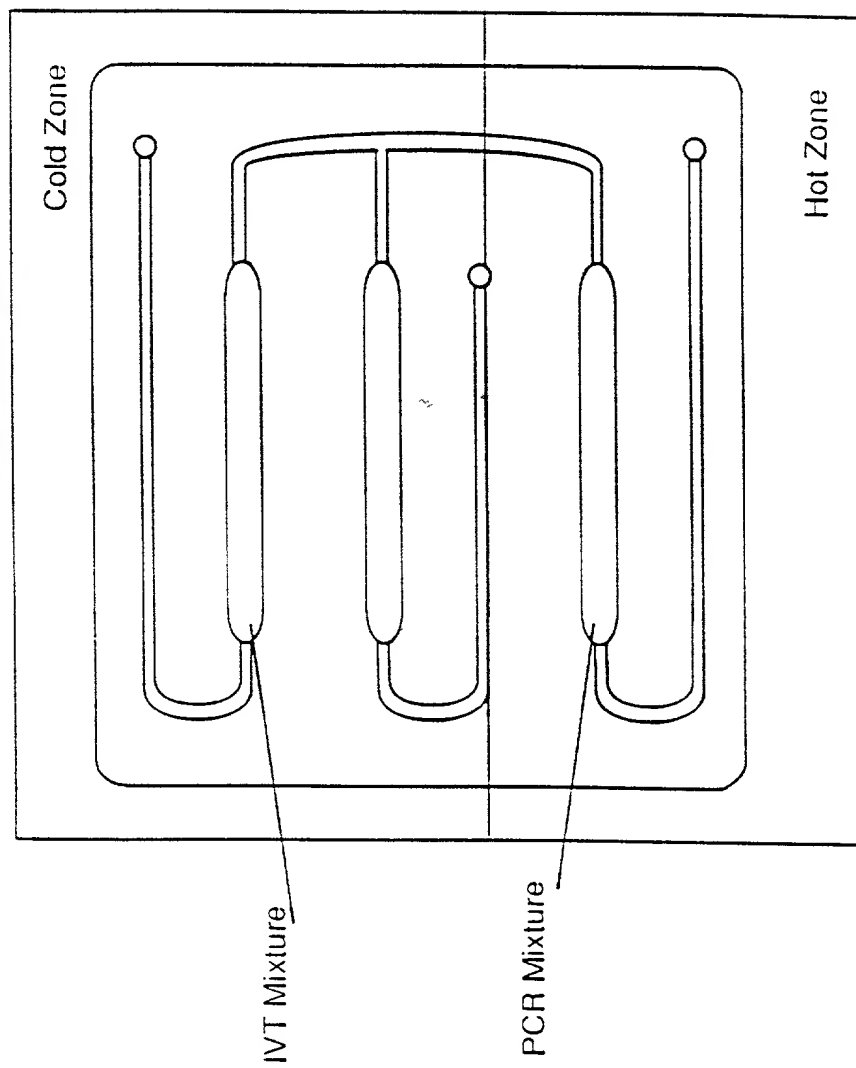


Figure 15a

60090-899260

PCR =>

IVT=>

Frag

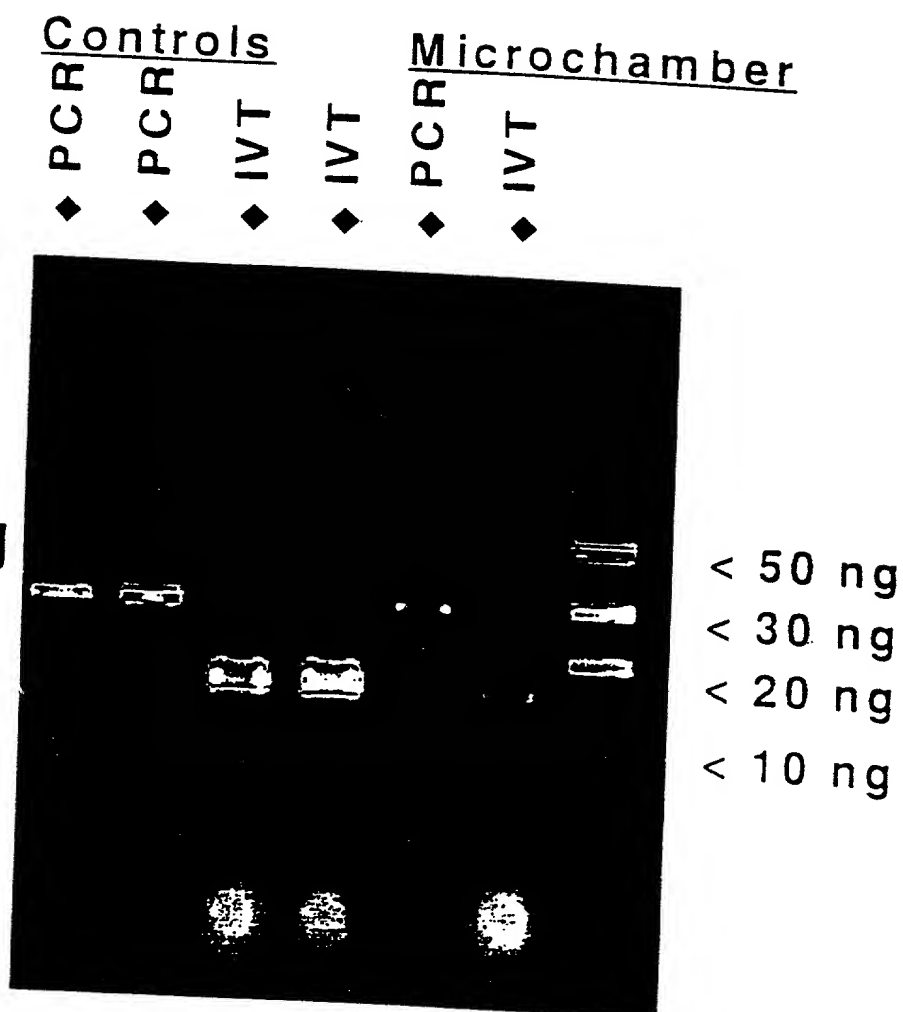


Fig. 15B